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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/769,691	01/30/2004	Eric Justin Gould Bear	MSFT-3471/304033.02	8609

41505 7590 01/28/2010

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EXAMINER	
MCDOWELL, JR, MAURICE L	

ART UNIT	PAPER NUMBER
2628	

MAIL DATE	DELIVERY MODE
01/28/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/769,691	BEAR ET AL.	
	Examiner	Art Unit	
	MAURICE MCDOWELL, JR	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,9-17,20-28,31-39 and 42-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6, 9-17, 20-28, 31-39, 42-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/27/2009 have been fully considered but they are not persuasive.

2. Applicant argues: While an image may have an associated state, it does not follow logically that because an image has a state, the position of a device is synonymous with the orientation of an image. As stated above, the examiner is asserting that detecting a position of a device is synonymous with detecting the orientation of an image. But claim 1 recites "detecting a change in orientation relative to the display of images presented on the display". The orientation of an image relative to the display on which the image is being presented is independent of, and unrelated to, the position of the display or the device in which the display is configured. This is evident from many devices that those of skill in the art interact with on a regular basis. For example, the orientation of the images presented on a television remains the same relative to the television regardless of whether the television itself is oriented normally, upside down, etc. Accordingly, detecting the position of a device is not the same as detecting the orientation of an image relative that device.

3. Examiner respectfully disagrees: Detecting the position of a device is the same as detecting the orientation of an image relative that device, if the device has a tilt sensor. As argued in the previous action, the tilt sensor in Hinckley inherently includes the state of the image. This state must be checked in order to change the orientation of an image, because without the state, there would only be a 50% chance of the image being displayed correctly (landscape or portrait); thus detecting the position of a display device as taught in Hinckley is

synonymous with “detecting a change in orientation relative to the display of images presented on the display from a first orientation to a second orientation” as claimed, because the state of the image must be checked every time the device is tilted so that the image may be displayed correctly. This argument can be applied as well to the remaining arguments regarding claim 1 that are related to Hinckley.

4. Applicant argues: As can be seen in the flow chart illustrated at Tenhunen's figure 2, any changes made to the display or the key mapping as described in Tenhunen are made responsive to the change of device position detected by Tenhunen's detector element. This is not the same as "responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the images presented on the display." As will be appreciated, detecting the position of a device is not the same as detecting the orientation relative to a display of images presented on a display.

5. Examiner respectfully disagrees: The detector element in Tenhunen is the same as "responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the images presented on the display", because Tenhunen like Hinckley inherently teaches that the state of the image and buttons must be stored, and as argued previously with regards to Hinckley, this state must be checked every time before the changes are made to the display or before the keys are logically remapped, otherwise there would only be a 50% chance of displaying or remapping the keys correctly.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-2, 4-6, 9, 12-13, 15-17, 20, 23-24, 26-28, 31, 34-35, 37-39, 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley et al. Pub. No.: US 2002/0021278 A1 in view of Tenhunen et al. Pub. No.: US 2002/0198029 A1.

8. Regarding claim 1, Hinckley teaches: A method for logically remapping commands to logical buttons of a computing device comprising a display, said logical buttons having associated commands, said method comprising: detecting a change in orientation relative to the display of images presented on the display from a first orientation to a second orientation at the computing device (figs. 10 and 11 see also [0072] [0073]).

9. Hinckley doesn't teach: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the images presented on the display.

10. The analogous prior art Tenhunen teaches: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the images

presented on the display (figs. 1a-c see also [0019]) for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the images presented on the display as shown in Tenhunen with Hinckley for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

12. Regarding claim 2, Hinckley teaches: The method wherein the display is a visual display device (figs. 10 and 11).

13. Regarding claim 4, Hinckley teaches: The method wherein the display is one from the group comprising: a visual display device, an audio display device, and a tactile display device (figs. 10 and 11).

14. Regarding claim 5, Hinckley teaches: The method further comprising detecting a change in orientation of the display at the computing device and, responsive to the detection of the change in orientation of the display, automatically changing the orientation relative to the display of the images presented on the display (figs. 10 and 11 see also [0072] [0073]).

15. Regarding claim 6, Hinckley teaches: The method further comprising detecting a command to change the orientation relative to the display of the images presented on the display from the first orientation to the second orientation at the computing device and, responsive to the

detection of the command, automatically changing the orientation relative to the display of the images presented on the display from the first orientation to the second orientation (figs. 10 and 11 see also [0072] [0073]).

16. Regarding claim 9, Tenhunen further teaches: The method wherein, if the computing device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons (figs. 1a-c).

17. Regarding claim 12, Hinckley teaches: A user interface system for logically remapping commands to logical buttons of a computing device having a display, said logical buttons having associated commands, said system comprising; a subsystem for detecting a change in orientation relative to the display of images presented on the display from a first orientation to a second orientation (figs. 10 and 11 see also [0072] [0073]).

18. Hinckley doesn't teach: a subsystem for, responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display.

19. The analogous prior art Tenhunen teaches: a subsystem for, responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display (figs. 1a-c see also [0019]) for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine a subsystem for, responsive to the detection of the change in orientation

relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display as shown in Tenhunen with Hinckley for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

21. Regarding claim 13, Hinckley teaches: The user interface system wherein the display is a visual display device (figs. 10 and 11).

22. Regarding claim 15, Hinckley teaches: The user interface system wherein the display is one from the group comprising: a visual display device, an audio display device, and a tactile display device (figs. 10 and 11).

23. Regarding claim 16, Hinckley teaches: The user interface system wherein, further comprising a subsystem for detecting a change in orientation of the display, and a subsystem for, responsive to the detection of the change in orientation of the display, automatically changing the orientation relative to the display of the images presented on the display (figs. 10 and 11 see also [0072] [0073]).

24. Regarding claim 17, Hinckley teaches: The user interface system further comprising a subsystem for detecting a command to change the orientation relative to the display of the images presented on the display from the first orientation to the second orientation, and a subsystem for, responsive to the detection of the command, automatically changing the orientation relative to the display of the images presented on the display from the first orientation to the second orientation (figs. 10 and 11 see also [0072] [0073]).

25. Regarding claim 20, Tenhunen further teaches: The user interface system wherein, if the computing device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons (figs. 1a-c).

26. Regarding claim 23, Hinckley teaches: A computer-readable medium having computer-readable instructions for a method of logically remapping commands to logical buttons of a computing device comprising a display, said logical buttons having associated commands for, said method comprising; detecting a change in orientation relative to the display of images presented on the display from a first orientation to a second orientation (figs. 10 and 11 see also [0072] [0073]).

27. Hinckley doesn't teach: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display.

28. The analogous prior art Tenhunen teaches: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display (figs. 1a-c see also [0019]) for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

29. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display as shown in Tenhunen with

Hinckley for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

30. Regarding claim 24, Hinckley teaches: The computer-readable medium wherein the display is a visual display device (figs. 10 and 11).

31. Regarding claim 26, Hinckley teaches: The computer-readable medium wherein the display is one from the group comprising: a visual display device, an audio display device, and a tactile display device (figs. 10 and 11).

32. Regarding claim 27, Hinckley teaches: The computer-readable medium wherein, automatically the method further comprises detecting a change in orientation of the display and, responsive to the detection of the change in orientation of the display, automatically changing the orientation relative to the display of the images presented on the display (figs. 10 and 11 see also [0072] [0073]).

33. Regarding claim 28, Hinckley teaches: The computer-readable medium wherein, the method further comprises detecting a command to change the orientation relative to the display of the images presented on the display from the first orientation to the second orientation and, responsive to the detection of the command, automatically changing the orientation relative to the display of the images presented on the display from the first orientation to the second orientation (figs. 10 and 11 see also [0072] [0073]).

34. Regarding claim 31, Tenhunen further teaches: The computer-readable medium wherein, if the computing device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons (figs. 1a-c).

35. Regarding claim 34, Hinckley teaches: A hardware control device for a method of logically remapping commands to logical buttons of a computing device comprising a display, said logical buttons having associated commands, said computing device further comprising: a component configured to detect a change in orientation relative to the display of images presented on the display from a first orientation to a second orientation (figs. 10 and 11 see also [0072] [0073]).

36. Hinckley doesn't teach: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display.

37. The analogous prior art Tenhunen teaches: responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display (figs. 1a-c see also [0019]) for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine responsive to the detection of the change in orientation relative to the display of the images presented on the display, automatically logically remapping the commands to the logical buttons based on the second orientation of the display as shown in Tenhunen with Hinckley for the benefit of to create a mobile station including a keypad, which is easier and more stable to use than previously, especially with one hand, and which can be adapted faster and more simply to different operating situations.

39. Regarding claim 35, Hinckley teaches: The hardware control device wherein the display is a visual display device (figs. 10 and 11).

40. Regarding claim 37, Hinckley teaches: The hardware control device wherein the display is one from the group comprising: a visual display device, an audio display device, and a tactile display device (figs. 10 and 11).

41. Regarding claim 38, Hinckley teaches: The hardware control device wherein, the component is further configured to detect a change in orientation of the display and, responsive to the detection of the change in orientation of the display, automatically changing the orientation relative to the display of the images presented on the display (figs. 10 and 11 see also [0072] [0073]).

42. Regarding claim 39, Hinckley teaches: The hardware control device wherein, the component is further configured to detect a command to change the orientation relative to the display of the images presented on the display from the first orientation to the second orientation and, responsive to the detection of the command, automatically changing the orientation relative to the display of the images presented on the display from the first orientation to the second orientation (figs. 10 and 11 see also [0072] [0073]).

43. Regarding claim 42, Tenhunen further teaches: The hardware control device wherein, if the computing device is symmetrical both vertically and horizontally, the logical remapping rotates the commands to the logical buttons (figs. 1a-c).

44. Claims 10-11, 21-22, 32-33, 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley et al. Pub. No.: US 2002/0021278 A1 in view of Tenhunen et al. Pub. No.: US 2002/0198029 A1further in view of Kfoury et al. Pub. No.: US 2003/0044000 A1.

45. Regarding claim 10, the previous combination of Hinckley and Tenhunen remains as above but doesn't teach: The method wherein, the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation.

46. The analogous prior art Kfoury teaches: The method wherein, the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation (figs. 1-4) for the benefit of best accommodating both right and left hand users.

47. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation as shown in Kfoury with the previous combination for the benefit of best accommodating both right and left hand users.

48. Regarding claim 11, Kfoury further teaches: The method wherein: if the images presented on the display are rotated one quarter to the right, the commands for UP and DOWN are transposed (figs. 2 and 4); if the images presented on the display are rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed (figs. 2 and 3 and 4); and if the images presented on the display are rotated three-quarters to the right, then the commands for PREV and NEXT are transposed (fig. 3).

49. Regarding claim 21, Kfoury further teaches: The user interface system wherein, the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation (figs. 1-4).

50. Regarding claim 22, Kfoury further teaches: The user interface system wherein: if the images presented on the display are rotated one quarter to the right, the commands for UP and DOWN are transposed (figs. 2 and 4); if the images presented on the display are rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed (figs. 2 and 3 and 4); and if the images presented on the display are rotated three-quarters to the right, then the commands for PREV and NEXT are transposed (fig. 3).

51. Regarding claim 32, Kfoury further teaches: The computer-readable medium wherein, the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation (figs. 1-4).

52. Regarding claim 33, Kfoury further teaches: The computer-readable medium wherein: if the images presented on the display are rotated one quarter to the right, the commands for UP and DOWN are transposed (figs. 2 and 4); if the images presented on the display are rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed (figs. 2-4); and if the images presented on the display are

rotated three-quarters to the right, then the commands for PREV and NEXT are transposed (fig. 3).

53. Regarding claim 43, Kfoury further teaches: The hardware control device wherein, the computing device is symmetrical along a one axis, including but not limited to rocking wheels, super wheels, rocking dogbones, and super dogbones, and for reference purposes the one axis is initially oriented vertically, then the commands are logically remapped to the logical buttons, relative to the first orientation (figs. 1-4).

54. Regarding claim 44, Kfoury further teaches: The hardware control device wherein: if the images presented on the display are rotated one quarter to the right, the commands for UP and DOWN are transposed (figs. 2 and 4); if the images presented on the display are rotated one half to the right, then the commands for UP and DOWN are transposed, and the commands for PREV and NEXT are transposed (figs. 2-4); and if the images presented on the display are rotated three-quarters to the right, then the commands for PREV and NEXT are transposed (fig. 3).

55. Claims 3, 14, 25, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinckley et al. Pub. No.: US 2002/0021278 A1 in view of Tenhunen et al. Pub. No.: US 2002/0198029 A1 further in view of Kfoury et al. Pub. No.: US 2003/0044000 A1 further in view of Pinder et al. Patent No.: 5,758,267.

56. Regarding claim 3, the previous combination of Hinckley and Tenhunen and Kfoury remains as above but doesn't teach: The method wherein the display is a non-visual display device.

57. The analogous prior art Pinder teaches: The method wherein the display is a non-visual display device (fig. 1) for the benefit of enhancing the functionality of switches or buttons without adding additional buttons and without creating a scheme that is not intuitive to the user.

58. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the display is a non-visual display device as shown in Pinder with the previous combination for the benefit of enhancing the functionality of switches or buttons without adding additional buttons and without creating a scheme that is not intuitive to the user.

59. Regarding claim 14, Pinder further teaches: The user interface system wherein the display is a non-visual display device (fig. 1).

60. Regarding claim 25, Pinder further teaches: The computer-readable medium wherein the display is a non-visual display device (fig. 1).

61. Regarding claim 36, Pinder further teaches: The hardware control device wherein the display is a non-visual display device (fig. 1).

Conclusion

62. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAURICE MCDOWELL, JR whose telephone number is (571)270-3707. The examiner can normally be reached on Mon-Friday 7:30am - 5:00pm Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on 571--272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MM

/XIAO M. WU/

Supervisory Patent Examiner, Art Unit 2628